

STATE OF ALASKA  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF MINING, LAND AND WATER  
SOUTHCENTRAL REGION LAND OFFICE

PRELIMINARY FINDING AND DECISION

FOR A PROPOSED AQUATIC FARMSITE LEASE AMENDMENT  
LOCATED SOUTH AND WEST OF KAHLI COVE,  
PRINCE OF WALES ISLAND

APPLICANT: JERRY RYGGS – DBA OYSTERS, LLC

ADL 107834

The Department of Natural Resources is accepting public comment on the following preliminary decision document for and amendment to increase the size of an existing aquatic farm site.

**Written comments must be received on or before 5:00 p.m., Thursday, September 15, 2011**

**PROPOSED ACTION:** The applicant proposes to amend his existing aquatic farming operations, authorized under ADL 107834, located in the Kahli Cove area, and to add 17 additional areas utilizing a variety of culture techniques. The total new area requested is 1.87 acres.

The applicant is an aquatic farm leaseholder with the following parcels included within his site:

Parcel A – Suspended growing area – 500' x 165' x 405' x 225' = 1.52 acres

Parcel B – Intertidal hardening and defouling area – 50' x 75' = 0.09 acres

Parcel C – Floating support facilities – 190' x 190' = 0.83 acres

Parcel D – Intertidal growing area for Pacific oysters and littleneck clams – 180' x 230' = 0.95 acres

Current lease equals 3.39 acres. Parcels E through L are part of another existing lease, held by Mr. Jerry Ryggs, for littleneck clam culture.

The lessee proposes to add 17 small intertidal areas located south and east of Kasaan islands and south of Kahli Cove. The lessee will be utilizing two different types of culture gear. Parcels M through S are proposed to have two to five near-bottom “flip-flop” lines anchored to rebar or bedrock.

The flip-flop gear will consist of vexar mesh bags with one end attached to a rope, galvanized wire, steel cable or vinyl-coated wire using two bait holder pins per bag. The bag size is 36” x 18” with a mesh size of ¼ or ½ inch. The opposite end of the bag has a foam float wrapped in protective netting attached with zip lock ties.

Parcel T is proposed to be a high water cove off the unnamed inlet on the east side of Dragun Point utilizing floating vexar mesh “shark-fin” bags with the mesh wrapped foam floats on each side of the bag. The rope or wire will be threaded through one inch PVC pipe pieces attached to one side of each bag with zip ties. The line will be anchored to the bottom on each end.

Parcels U, V, X, EC1 through EC5 are proposed on the west side of Dargun Point utilizing the flip-flop culture for Pacific Oysters.

Parcel T is proposed to be a high water cove off the unnamed inlet on the east side of Dragun Point. It will be used to culture Pacific oysters in floating vexar mesh “shark-fin” bags with the mesh wrapped foam floats on each side of the bag. The rope or wire will be threaded through one inch PVC pipe pieces attached to one side of each bag with zip ties. The line will be anchored to the

bottom on each end.

Parcel U is proposed on the west side of Dargun Point utilizing the flip-flop culture for Pacific Oysters.

**Note:** Mr. Ryggs is also asking for a support facility on the uplands (Parcel UL). This would require authorization and be permitted through the upland land owner, US Forest Service as a special use permit

Access to the site is by boat. The proposed location is only accessible by boat or floatplane. Total new acreage requested equals 1.87 acres.

**AUTHORITY:** AS 38.05.035; AS 38.05.070; AS 38.05.075; AS 38.05.083; AS 38.05.127; AS 38.05.128; 11 AAC 51; and 11 AAC 63

This decision addresses and is based on those issues under the authority of the Department of Natural Resources (DNR) under Title 38. While issues may be addressed that are not within the scope of DNR's responsibilities, this decision's purpose is to determine whether or not to issue a DNR lease and does not make any determinations whatsoever on the issuance of other agency authorizations that are necessary for aquatic farming activities.

**ADMINISTRATIVE RECORD:** The application is considered to be an amendment to the applicants' existing farmsite lease authorized under ADL 107834.

**LOCATION:**

**USGS MAP COVERAGE:** Craig D-4

**NAUTICAL CHART:** 17403

**LEGAL DESCRIPTION:**

Township 68 South, Range 79 East, CRM, Sections 31 (Parcels M, N, O, X);  
Township 68 South, Range 78 East, CRM, Section 36 (Parcel L);  
Township 69 South, Range 79 East, CRM, Section 2 (Parcels P, Q, R, S, T, U W)  
Township 69 South, Range 78 East, CRM, Section 5 (Parcels EC1 through EC5)

**LATITUDE AND LONGITUDE:** The latitude and longitude of each corner to the nearest 0.001 minute using NAD 83, beginning at the northeastern most corner and moving clockwise, is approximately:

Parcel M: Intertidal area utilizing 'flip-flop' culture gear for oysters – 30' x 50' = 0.03 acres

NE Corner	55° 55.537' N	133° 15.736' W
SE Corner	55° 55.533' N	133° 15.742' W
SW Corner	55° 55.536' N	133° 15.754' W
NW Corner	55° 55.540' N	133° 15.748' W

Parcel N: Intertidal area utilizing 'flip-flop' culture gear for oysters – 45' x 166' = 0.17 acres

NE Corner	55° 55.524' N	133° 15.743' W
SE Corner	55° 55.497' N	133° 15.740' W
SW Corner	55° 55.492' N	133° 15.750' W
NW Corner	55° 55.519' N	133° 15.753' W

Parcel O: Intertidal area utilizing 'flip-flop' culture gear for oysters – 76' x 117' = 0.20 acres

NE Corner	55° 55.442' N	133° 15.790' W
SE Corner	55° 55.427' N	133° 15.801' W
SW Corner	55° 55.431' N	133° 15.821' W
NW Corner	55° 55.446' N	133° 15.810' W

Parcel P: Intertidal area utilizing 'flip-flop' culture gear for oysters – 20' x 108' = 0.05 acres

NE Corner	55° 55.417' N	133° 15.810' W
SE Corner	55° 55.406' N	133° 15.835' W
SW Corner	55° 55.407' N	133° 15.840' W
NW Corner	55° 55.418' N	133° 15.815' W

Parcel Q: Intertidal area utilizing 'flip-flop' culture gear for oysters – 40' x 125' = 0.11 acres

NE Corner	55° 55.407' N	133° 15.840' W
SE Corner	55° 55.391' N	133° 15.830' W
SW Corner	55° 55.386' N	133° 15.839' W
NW Corner	55° 55.408' N	133° 15.850' W

Parcel R: Intertidal area utilizing 'flip-flop' culture gear for oysters – 38' x 94' = 0.08 acres

NE Corner	55° 55.381' N	133° 15.840' W
SE Corner	55° 55.375' N	133° 15.830' W
SW Corner	55° 55.377' N	133° 15.839' W
NW Corner	55° 55.408' N	133° 15.850' W

Parcel S: Intertidal area utilizing 'flip-flop' culture gear for oysters – 70' x 97' = 0.16 acres

NE Corner	55° 55.377' N	133° 15.984' W
SE Corner	55° 55.367' N	133° 16.007' W
SW Corner	55° 55.377' N	133° 16.013' W
NW Corner	55° 55.387' N	133° 15.990' W

Parcel T: Intertidal area utilizing "shark-fin" culture for oysters – 64' x 80' = 0.12 acres

NE Corner	55° 54.784' N	133° 15.432' W
SE Corner	55° 54.774' N	133° 16.432' W
SW Corner	55° 54.774' N	133° 15.456' W
NW Corner	55° 54.784' N	133° 15.456' W

Parcel U: Intertidal area utilizing 'flip-flop' culture gear for oysters – 35' x 150' = 0.12 acres

NE Corner	55° 55.000' N	133° 15.519' W
SE Corner	55° 54.976' N	133° 15.413' W
SW Corner	55° 54.979' N	133° 15.521' W
NW Corner	55° 55.001' N	133° 15.526' W

Parcel V: Intertidal area utilizing 'flip-flop' culture gear for oysters – 32' x 335' = 0.25 acres

NE Corner	55° 54.920' N	133° 15.613' W
SE Corner	55° 54.916' N	133° 15.619' W
SW Corner	55° 54.920' N	133° 15.711' W
NW Corner	55° 54.026' N	133° 15.715' W

Parcel W: Intertidal area utilizing 'shark-fin' culture gear for oysters – 57' x 125' = 0.16 acres

NE Corner	55° 55.398' N	133° 15.667' W
SE Corner	55° 55.383' N	133° 15.647' W
SW Corner	55° 55.382' N	133° 15.658' W
NW Corner	55° 55.393' N	133° 15.693' W

Parcel X: Intertidal area utilizing 'flip-flop' culture gear for oysters – 85' x 95' = 0.19 acres

NE Corner	55° 55.377' N	133° 15.984' W
SE Corner	55° 55.367' N	133° 16.007' W
SW Corner	55° 55.377' N	133° 16.013' W
NW Corner	55° 55.387' N	133° 15.990' W

Parcel EC1: Intertidal area utilizing 'flip-flop' culture gear for oysters – 18' x 92' = 0.04 acres

NE Corner	55° 55.045' N	133° 19.773' W
SE Corner	55° 55.043' N	133° 19.777' W
SW Corner	55° 55.052' N	133° 19.798' W
NW Corner	55° 55.054' N	133° 19.795' W

Parcel EC2: Intertidal area utilizing 'flip-flop' culture gear for oysters – 20' x 89' = 0.04 acres

NE Corner	55° 55.056' N	133° 19.805' W
SE Corner	55° 55.054' N	133° 19.809' W
SW Corner	55° 55.064' N	133° 19.827' W
NW Corner	55° 55.066' N	133° 19.823' W

Parcel EC3: Intertidal area utilizing 'flip-flop' culture gear for oysters – 26' x 41' = 0.02 acres

NE Corner	55° 55.076' N	133° 19.838' W
SE Corner	55° 55.073' N	133° 19.844' W
SW Corner	55° 55.079' N	133° 19.850' W
NW Corner	55° 55.081' N	133° 19.845' W

Parcel EC4: Intertidal area utilizing 'flip-flop' culture gear for oysters – 23' x 133' = 0.07 acres



NE Corner	55° 55.076' N	133° 19.838' W
SE Corner	55° 55.073' N	133° 19.844' W
SW Corner	55° 55.079' N	133° 19.850' W
NW Corner	55° 55.081' N	133° 19.845' W

Parcel EC5: Intertidal area utilizing 'flip-flop' culture gear for oysters – 12' x 225' = 0.06 acres

NE Corner	55° 55.023' N	133° 19.680' W
SE Corner	55° 55.986' N	133° 19.689' W
SW Corner	55° 55.987' N	133° 19.700' W
NW Corner	55° 55.023' N	133° 19.690' W

The total number of acres requested is 1.87 acres.

### ADFG provided the following Table

Details on each parcel to be added and dropped are provided in Table 1.

Table 1. Details on Ryggs 2011 Amendment				
Amendment Request	Dimensions	Gear to Be Used	Area	Acreage
New Parcel M	30 ft X 50 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.03
New Parcel N	45 ft x 166 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.17
New Parcel O	76 ft x 117 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.2
New Parcel P	20 ft x 108 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.05
New Parcel Q	40 ft x 125 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.11
New Parcel R	38 ft x 94 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.08
New Parcel S	70 ft x 97 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.16
New Parcel T	64 ft x 80 ft	floating vexar shark fin bag lines for Pacific oysters	Suspended Culture	0.12
New Parcel U	35 ft X 150 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.12
New Parcel V	32 ft X 335 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.25
New Parcel W	57 ft x 125 ft	floating vexar shark fin bag lines for Pacific oysters	Suspended Culture	0.16
New Parcel X	85 ft x 95 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.19
New Parcel EC	18 ft x 92 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.04
New Parcel EC2	20 ft x 89 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.04

New Parcel EC3	26 ft x 41 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.02
New Parcel EC4	23 ft x 133 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.07
New Parcel EC5	12 ft x 225 ft	intertidal flip-flop line and vexar bags for Pacific oysters at the 0 to 2 ft tide level	Intertidal	0.06
<b>Total Acreage Proposed to be Added</b>				<b>1.87</b>
<b>Total Acreage for Permitted Aquatic Farm After Proposed Changes</b>				<b>5.26</b>

**GEOGRAPHIC:** The proposed amendment is located on state-owned tide and submerged lands west and south of Kahli Cove and approximately four miles northwest of the community of Naukati, Prince of Wales Island in southeast Alaska.

**POLITICAL INFORMATION:**

**BOROUGH / MUNICIPALITY:** This application is outside of an organized borough.

**REGIONAL CORPORATION / NATIVE VILLAGES AND TRIBES:** Sealaska Corporation; Craig Community Association; Shaan Seet, Inc.; Klawock Cooperative Association; and Klawock Heenya Corporation

**FISH AND GAME ADVISORY COMMITTEES:** Craig, Klawock and Edna Bay Fish and Game Advisory Committees

**TITLE:**

**ACQUISITION AUTHORITY:** Submerged Lands Act of 1953. (P.L. 31, 83<sup>rd</sup> Congress, First Session; 67 Stat. 29); Equal Footing Doctrine; Section 1 of the Alaska Statehood Act.

**TITLE REPORT:** A title report was requested on August 2, 2011

**PLANNING AND CLASSIFICATION:**

**LAND MANAGEMENT PLAN:** Prince of Wales Island Area Plan, Management Unit 4 – El Capitan, Subunit 4b – El Capitan, South, adopted in June 1985 and revised in October 1998.

**SURFACE CLASSIFICATION:** The Prince of Wales Island Area Plan classifies state owned tidelands in proposed parcels M through X as General Use lands (Gu). Parcels EC1 through EC5 located off El Capitan Island are classified as Recreation anchorages (Ra).

GU – General Use. Lands which may have a number of important resources but for which a specific resource allocation decision is not possible because of inadequate economic, resource or other information; or is presently inaccessible and remote and development is not likely to occur within the next 20 years; or contains one or more resource values, none of which is of sufficiently high value to merit designation as a primary use. A number of different types of uses, including forest harvest, may be appropriate in portions of designated General Use. Aquatic farming is allowed under General Use classified lands.

Ra – Recreation (anchorages). Location commonly used by recreation or commercial vessels for anchoring. Aquatic farming could be allowed under this use but only if it did not interfere with an existing anchorage area.

\* Sites EC1-EC5 could be eliminated, depending on comments during the public review comment period, due to the Ra classification in the Prince of Wales Island Area Plan.

**SUBSURFACE MINERAL ORDERS:** The proposed sites are is open to mineral entry.

## **SURVEY AND APPRAISAL:**

**SURVEY:** State law does not require a survey be completed prior to issuing a 10-year negotiated lease. However, the department may require one in the future, at the applicant's expense, if boundary conflicts or disputes over acreage arise.

**APPRAISAL:** The Division of Mining, Land and Water has approved an administrative lease fee schedule for aquatic farmsites that meet the conditions listed within the schedule. The current lease fee schedule will be used to establish the fair market rental for the farmsite. The current lease fee schedule, Appraisal No. 2522-9, sets the annual lease fee at \$450 for the first acre, or fraction thereof, plus \$125 for each additional acre, or fraction thereof. The fee schedule is valid for a period of two years. Any leases authorized after that date will be subject to the revised fee schedule.

The applicant has the option to request a site-specific appraisal, at their expense, before the lease is issued, if he or she does not wish to use the fee schedule. If an applicant opts for a site-specific appraisal, the appraisal, approved by the division, will establish the rental for the lease and the fee schedule will no longer be an option. The appraisal must be completed prior to lease issuance.

**PUBLIC/AGENCY NOTICE AND COMMENTS:** Public notice of the proposal has been sent to various newspapers, post offices, agencies, boroughs/cities, native corporations, Fish and Game Advisory committees, etc. Public and agency comments are welcome during the comment period and will be considered in the final best interest finding. Only those who provide written comments during the comment period or who testify at a public hearing will be sent a copy of the final best interest finding and will be eligible to appeal. The final best interest finding will include an explanation of the appeal process. **The public comment period begins on August 17, 2011 and will end at 5:00 p.m. on Thursday, September 15, 2011.**

The preliminary best interest finding is subject to public comments received during the comment period. The final best interest finding will consider and address any comments related to the subject proposal and will be available on or about October 10, 2011. If significant changes occur to this decision as a result of public comments received, additional notice will be sent to those who provided comments, either in writing or by testifying at a public hearing.

## **Evaluation by the Alaska Department of Fish and Game**

***I. Physical and Biological Characteristics:*** Based on the information provided by the applicant on the site physical and biological characteristics, the proposed sites appear capable of supporting the farm activities proposed. Details on the proposed areas are summarized below.

**Protection from Oceanographic and Atmospheric Extremes:** The physical exposure notes from Alaska ShoreZone imagery mapped data<sup>1</sup> shows Parcel M-X as “protected” defined as a maximum effective fetch of < or = to 10 km. Parcels EC1- EC5 are in areas that are “very protected” defined as a maximum effective fetch of < 1 km. The proposed support facility structures and farm culture gear have a sound configuration and anchoring system and by selecting the new area parcels that are less prone to icing these should be able to withstand most ocean and atmospheric conditions. The proposed intertidal and suspended farm gear and anchoring system has been used on effectively at several other permitted parcels at this farm site and at other aquatic farms in Southeastern Alaska.

**Sufficient Environmental Conditions:** The proposed aquatic farm operation project is in an area that appears to have sufficient water exchange, water temperatures, currents, salinity, and primary production to support an aquatic farm and maintain healthy environment for other marine organisms.

**Sufficient Water Depth:** No depth information was provided by the applicant on depth of gear and depth of water at site at low tide. Based on the proposed floating vexar shark fin bag and lines culture gear to be used at Parcels T and W, the water depth is most likely sufficient for these parcels to prevent this type of gear from grounding and impacting the benthos under floating structures. The permit holder has been requested to provide this depth information for these sites at mean low low tide. The criterion is not applicable for all the other proposed intertidal site parcels using intertidal near-bottom culture gear.

**Eelgrass and Kelp Beds Maintained:** Eelgrass and kelp habitats are among some of the most productive and biologically diverse. Among other things, eelgrass and kelp beds helps prevent erosion and maintain stability of near-shore environments and provide food, breeding areas, and protective nurseries for fish, shellfish, crustaceans, and many other animals. Operations must be done in a manner to minimize turbidity in the area and to prevent any trampling or shading that may impact the health and abundance of eelgrass beds.

ShoreZone Imagery data<sup>2</sup> for intertidal areas shows no eelgrass, *Zoster* sp., were recorded for five (5) proposed Parcels EC1-EC5. Continuous bio-bands of eelgrass, *Zoster* sp., were observed adjacent to twelve (12) proposed Parcels M-X recorded (Figures 1 and 2). There was a potential that access to Parcels M-X or gear used at these parcels, may result in trampling or shading continuous eelgrass beds that may significantly and adversely impact the health and abundance of eelgrass beds near these sites. Review of ShoreZone aerial photos show that for seven pocket beaches, Parcels N-S and V, the adjacent eelgrass is dense enough that reasonable access at the site may be a concern. No photos were available for Parcel M. Parcel W looks like it has dense eelgrass on it. Parcels U and X seem to have reasonable access to the site.

ADF&G staff surveyed the proposed site parcels in August to get a better idea of the eelgrass density and identify if sites had reasonable access to the site to avoid eelgrass

<sup>1</sup> NOAA (National Oceanic and Atmospheric Administration), Fisheries, National Marine Fisheries Service. Alaska ShoreZone: Coastal Mapping and Imagery. <http://akr-mapping.fakr.noaa.gov/szflex/> (Accessed July 2011).

<sup>2</sup> NOAA (National Oceanic and Atmospheric Administration), Fisheries, National Marine Fisheries Service. Alaska ShoreZone: Coastal Mapping and Imagery. <http://akr-mapping.fakr.noaa.gov/szflex/> (Accessed July 2011).

degradation. Eelgrass was observed to be in subtidal areas near Parcels M-P and adequate access was found to the parcels where either low or no eelgrass existed. For Parcel Q, there was access on one corner of the parcel and medium density eelgrass beds were observed near this parcel in low intertidal areas. For Parcel R, it appeared that medium density eelgrass beds were observed inside the coordinates provided for the parcel in low intertidal areas. Access to Parcel R was found on the site near a large rock. For Parcel S, it appeared that high-density eelgrass beds were observed inside the coordinates provided for the parcel in low intertidal areas. There was access to Parcel S on two sides near the beach and near a rock on the opposite side. There appeared to be problems with the Parcel V coordinates, as it appears that the parcel goes long ways into the bay. For Parcel W, it appeared that low-density eelgrass beds were observed inside the coordinates provided for the parcel and low densities were observed in the low intertidal area. There was access to Parcel W near rocks.

Sites with eelgrass beds or near high-density eelgrass beds, or those without reasonable access will not be considered for permitting under the Aquatic Farm regulations. **Based on the survey, Parcels R-W were observed to have eelgrass beds on the parcel coordinates provided by the applicant and ADF&G would not be able to permit them in their present location.** ADF&G can work with the applicant to adjust parcel coordinates for these parcels to avoid eelgrass beds that exist at low tide or the applicant can drop these parcels. Also during the survey, Mr. Ryggs indicated that he wanted to combine M and N so that he can hang the bags between rocks away from any eelgrass beds exposed at low tide. New coordinates would be needed for this change.

For those sites that are approved and have good access to the parcel, the following operation permit conditions will apply to this amendment to maintain the health and abundance of eelgrass beds and avoid significant adverse impacts to this important resource:

**A 4-foot buffer zone will be required around established eelgrass beds (*Zostera* sp) to maintain the health and abundance of eelgrass beds in the area. You will not conduct operational activities or place culture gear within the buffer zone. If new data becomes available on eelgrass beds in the area, further measures to increase or decrease this buffer may be required. Entrance to and exit from intertidal parcels must occur where eelgrass is least dense or absent.**

If health and the abundance of eelgrass beds in the area are not properly maintained within the proposed aquatic farm site, project modifications to the aquatic farm operations permit will be made to correct the condition.



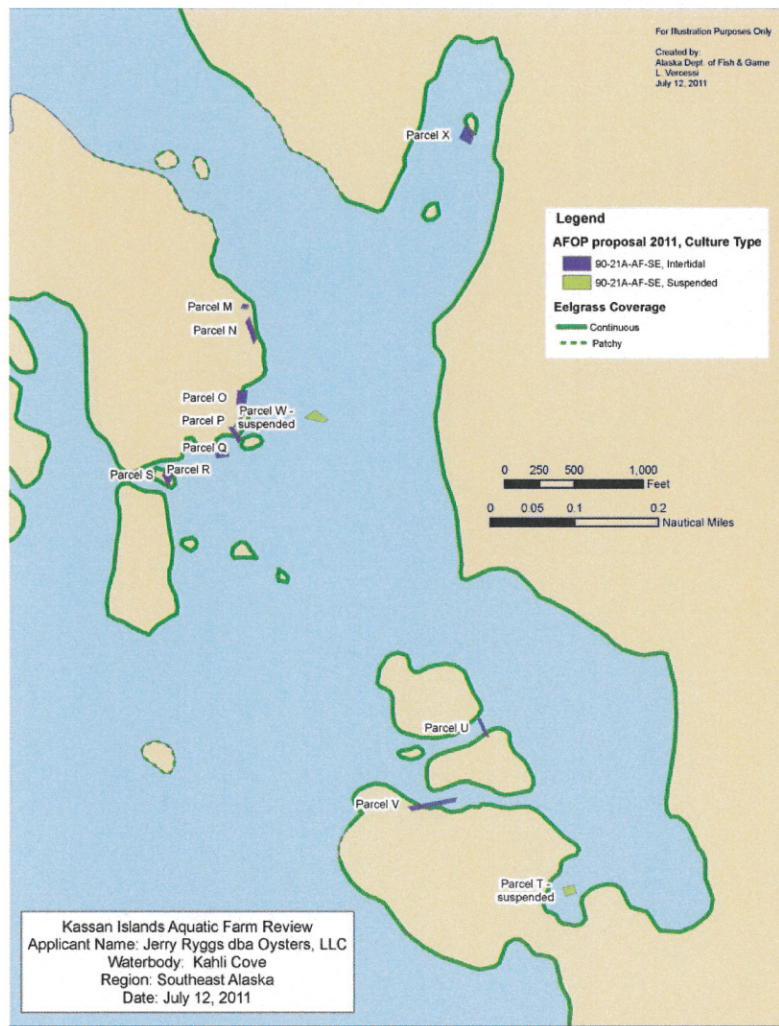


Figure 1. Eelgrass beds in the vicinity of the proposed Ryggs parcels

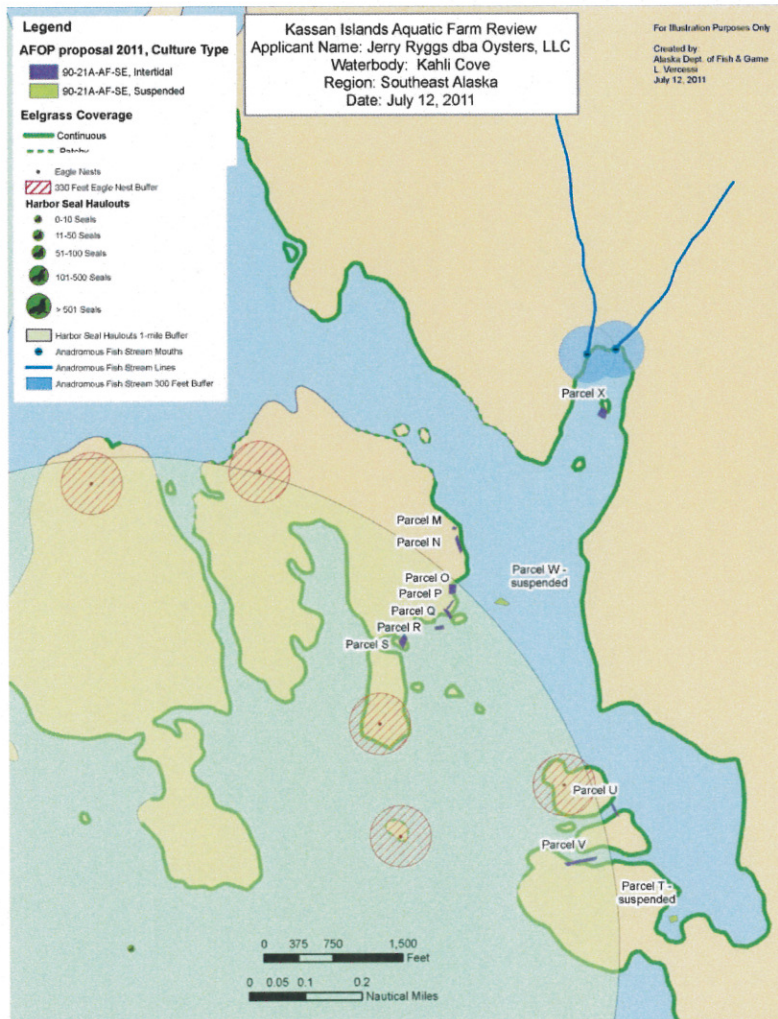


Figure 2. Vicinity of Eagle Nests, Harbor Seal Haulout, and Eelgrass near the Proposed Ryggs Site Parcels

**Anadromous Fish Streams:** Anadromous streams catalogued for various salmon species are located near one of the proposed parcels, Parcel X.<sup>3</sup> However, none of the site parcels are located within 300 feet of the mouth of an anadromous fish stream. The closest anadromous streams are located 575 ft and 625 ft from Parcel X. It is unlikely that the current design of the proposed project structures and gear will significantly affect fish rearing habitats for salmonids and other marine fishes and will allow adequate fish passage for salmonid adults that may be in the milling or migrating through the area.

Floating structures and farm gear in the bay could impede salmon migration enough to draw sportfish angler use to the area during August and September for coho salmon and increase angler efficiency and thereby causing concern for nearby salmon stream coho stocks. This could be remedied later by a local seasonal angling closure if it was an issue.

<sup>3</sup>Johnson, J. and K. Klein. 2009. Catalog of waters important for spawning, rearing, or migration of anadromous fishes – Southcentral Region, Effective June 1, 2009. Alaska Department of Fish and Game, Special Publication No. 09-03, Anchorage.



**II. Existing Uses not Significantly Altered:** The proposed aquatic farm site will not significantly alter an established use defined in regulations as a commercial fishery, sport fishery, personal use fishery, or subsistence fishery.

**Commercial Fisheries:** The proposed parcels are located in ADF&G Commercial Fisheries Division statistical area sub-district, 103-90. The proposed amendment is not expected to cause any significant alterations to the existing commercial fisheries resource use in this statistical area. See details below:

**Geoducks:** Harvest data shows commercial geoduck fishery landings took place in 2009, but not in 2008 and 2010 for this area.

**Sea cucumber:** The proposed areas are near the Sea Otter Sound commercial sea cucumber dive fishery harvest area. Harvest data shows commercial sea cucumber fishery landings took place in 2008 and 2010, but not in 2009 for this area. There is a commercial sea cucumber fishery in the greater area of Sea Otter Sound, however the proposed new site represents a tiny fraction of sea cucumber habitat and fishery area.

**Red Sea Urchins:** No commercial red sea urchin dive fishery landings took place for this statistical area.

**Salmon:** Harvest data shows landings in this statistical area during 2010 for commercial salmon fisheries using purse seining (Chinook, coho, sockeye, pink, and chum salmon), hand trolling (Chinook, sockeye, coho, and pink salmon), and power trolling (Chinook, coho, pink, and chum). No salmon set netting or gillnet salmon fisheries occurred for this area in 2010.

**Herring:** No commercial herring fishery landings occurred in this area in 2010.

**Shrimp:** Spot shrimp fishery landings were reported in 2010 for this statistical area.

**Dungeness crab:** Harvest data from statistical area 103-90 shows commercial Dungeness landings in 2010. Aerial surveys of the Dungeness grounds in central and northern Southeast are conducted every June after the commercial fishery opens. Statistical area 103-90 is not part of the annual aerial survey so effort data can only be described for the statistical area itself, and not for any of the bays or inlets that are part of statistical area 103-90. The project footprint is small, the growing area is subtidal and suspended, and the bottom type is listed as bedrock in the application. It is likely that the project amendment will have negligible impact on commercial Dungeness fisheries. However, Dungeness crabs are often found in eelgrass beds<sup>4</sup>. Any parcels located in eelgrass beds will not be permitted to avoid potential impacts to Dungeness habitat.

**Sport Recreational Fishery:** Since no permit system is in place for the personal use fishery, the amount of effort and harvest in the area would be difficult to gauge. The Statewide Harvest Survey does tally personal use harvest in Southeast but summarizes

<sup>4</sup> O'Clair, R. M. and C.E. O'Clair. 1998. Southeast Alaska's Rocky Shores: Animals. Plant Press, Auke Bay, AK. 564 pp.

these data on a wider scale than district or statistical area. Due to their design, oyster farms have not seemed to have significant negative impact on anglers. It is likely that the project area is also used by personal use Dungeness fishers. The proposed aquatic farm site project is not expected to cause any significant alterations to the existing sport recreational fishery use.

**Subsistence Use:** Subsistence harvest of fish, shellfish, aquatic plants, and marine mammals by residents of Whale Pass, Craig and Klawock Community may occur in the area. Coffman Cove residents may harvest marine invertebrates in the area for subsistence according to Tongass Resource Use Cooperative Study (TRUCS) data. Naukati and Edna Bay residents have harvested marine invertebrates over the larger area of Sea Otter Sound, Davidson Inlet, El Capitan Passage and the nearshore waters of Prince of Wales Island and other major islands according to a 1997 household survey conducted by the Subsistence Division. Statistical area 103-90 lies within Section 3-C and there is no customary and traditional use of Dungeness crab in this section. The proposed amendment is not expected to cause any significant alterations to the existing subsistence use.

**Anchorage:** The area is not a critical vessel anchorage area.

**III. Compatible with Fish and Wildlife Resources:** The proposed aquatic farm site is compatible with fish and wildlife resources in the area.

**Predator and Pest Control Methods:** Predator exclusion devices to be used at the proposed site are expected to be utilized in a manner that minimizes impacts on non-targeted fish and wildlife resources in the area.

**Sensitive Wildlife:** The proposed aquatic farm site is not expected to adversely impact seabird colonies, sea lion haulouts and rookeries, seal haulouts and pupping areas, and walrus haulouts.

**Sea Bird Colonies:** There are no sea bird colonies identified within 1 mile of the proposed site parcels.<sup>5</sup>

**Eagle Nest:** There are no eagle nests within 330 ft of the proposed project site parcels<sup>6</sup>

**Sea Mammal Habitat:** Six (6) parcels (Parcels O-S and V) are located within 1 mile of a known harbor seal haulout area based on the linear distance from the northeastern latitude and longitude coordinate of the proposed aquatic farm site parcels and the center point of the nearest known marine mammal haulout<sup>7</sup> (Figure 2). A mean count of between 0 and 10 harbor seals were present at these haulouts during the 1998-2002 survey years. Relative to the numbers of the population stock

<sup>5</sup> U.S. Fish and Wildlife Service, (current year). Beringian Seabird Colony Catalog -- computer database. U.S. Fish and Wildlife Service, Migratory Bird Management, Anchorage, Alaska 99503.

<sup>6</sup> U.S. Fish and Wildlife Service, Migratory Bird Management. Alaska Bald Eagle Nest Atlas-computer database. 2008.

<sup>7</sup> Data provided by NOAA Fisheries Service, Alaska Region, Protected Resources Division with aerial surveys completed by researchers from NOAA Fisheries Service, Alaska Fisheries Science Center, and National Marine Mammal Laboratory.

for this management area, the haulout is secondary based on the harbor seal counts. This proposed aquatic farm project is not expected to adversely impact sea mammal habitats.

**Endangered species:** The proposed aquatic farm site will not adversely impact endangered and threatened species recovery and habitat efforts.

#### ***IV. Operation and Development Plan:***

**Increase Productivity/Maintenance/Rotation Schedule:** No changes were made to the operation and development plan for this project.

#### ***V. Species to be Cultured and Site Suitability***

The department has not conducted a site suitability study for this site. Based on information provided by the applicant, the proposed intertidal site parcels is capable of supporting the activities proposed. The proposed parcels are near existing aquatic farm operations that are suitable for suspended oyster culture.

#### ***VI. Request for Additional Information***

The applicant needs to provide the following information:

- Adjusted coordinates for Parcels R, S, T, U and V, and W away from eelgrass beds.
- Adjusted coordinates for the revised combined M and N footprint.

**ENVIRONMENTAL RISK ASSESSMENT:** The applicant has submitted a signed environmental risk questionnaire. The questionnaire asks for information on potentially hazardous materials, such as plans for onsite storage of fuel or chemicals. The applicant has indicated that no on-site use, storage, transport, disposal, or otherwise, of any petroleum products will be used during the course of the proposed activities.

#### **BONDING AND INSURANCE:**

**BONDING:** Bonding, or another form of security, is required under AS 38.05.083 and 11 AAC 63.080. The bond must cover the costs of site cleanup and restoration, any associated cleanup costs after termination of the lease, including any unpaid rentals or other obligations accruing until site restoration is complete. The regulations require the minimum security amount of \$2,500 for an aquatic farm lease. Factors such as location and amount of improvements at the site are taken into consideration when the bond amount is determined.

**INSURANCE:** At this time the DNR does not require this type of activity to have general liability insurance. General liability insurance may be required in the future depending on the aquatic farming operations and the procedures of the department at the time changes are made to the lease or a renewal lease is issued. The lessee is responsible for acquiring other types of insurance, such as Workman's Compensation Insurance, that may be required

under other local/state/federal laws.

**POTENTIAL CONFLICTS AND PENDING INTERESTS:** The DFG has reviewed this proposal and offers the following information. The proposal lies within DFG's Subdistrict 103-90, Davidson Inlet. A commercial sea cucumber dive fishery occurs in this area. There is minimal other commercial fishing in the area. The DFG indicated that the additional floating facilities would not impact users in the area any more than the existing caretaker facilities.

The Department of Environment Conservation, Division of Environmental Health, provided comments that they had concerns with the number of persons at the site, the method of sewage, grey water, and garbage disposal. The applicant is advised and encouraged to contact DEC to discuss concerns with water quality classification with the addition of the new facilities.

DNR believes the additional facilities are warranted due to the size of the lessee's current operations and the need for additional crew quarters and storage area for gear, equipment, and supplies. In addition, due to the fact that these additional structures are contained within the current authorized farmsite boundaries, no increase in the lease fee is necessary and DNR believes the proposed amendment would not significantly impact existing uses of this area. The additional structures do, however, increase the costs for site cleanup and restoration, should the lessee abandon the site without performing these requirements. Therefore, the bond will be adjusted should the application amendment be approved. See the Recommendations section below for the amount that was calculated to be necessary for the placement of the additional structures.

Information from the U.S. Coast Pilot 8 indicates that Kahli Cove, just south of the proposal, provides suitable anchorage for small craft.

There are no known pending interests at the location of the proposal.

**PRINCE OF WALES ISLAND AREA PLAN INFORMATION SPECIFIC TO THIS PROPOSAL:** The proposed site lies within Management Unit 7 – Sea Otter Sound, Subunit 7b - Tuxekan and has a designation of Shoreline Development-commercial/industrial, Recreation-anchorage, and Commercial Recreation. This subunit has been identified for multiple use management. Logging, centered on Tuxekan Island, is the primary economic activity. State tide and submerged lands will be managed to support this activity.

Tide and submerged lands will also be managed to protect the most important recreation and fish and wildlife habitat and harvest area. Stanley Creek and its estuary, which drains into Tuxekan Passage, are very popular with area residents and island visitors for fishing and waterfowl hunting. Other popular recreation areas include Surku Cove, Scott Lagoon, and the narrow passage known as Skookumchuck between El Capitan Island and Tuxekan Island. Management of these state tide and submerged lands will emphasize the recreation values. Jinhi Bay has protected waters that can be accessed from the Tuxekan road system. This subunit will be managed for multiple uses. Water dependent commercial or industrial activities are both considered appropriate at Jinhi Bay, and there is limited usable waterfront land for water-related commercial or industrial activities at Naukati. Inland areas can support a variety of uses, including limited timber harvest.

The Sea Otter Sound marine waters have characteristics favorable for aquatic farming. Aquatic farming is allowed but should locate in a place and in a manner that will have minimum impacts on primary designated uses. Where feasible and prudent, aquatic farming should locate in open water

or in larger bays rather than in small isolated coves. Aquatic farming should not preclude residential uses, including access, anchorage, and planned disposal of land. Aquatic farming support facilities may be located on state uplands in Jinhi Bay.

Numerous cultural sites are listed within this subunit. DNR will consult with the Division of Parks and Outdoor Recreation, Office of History and Archaeology, with any recommendations included in the final best interest finding.

**Upland Owner / Management Intent:** The uplands adjacent to the proposal are owned by the State of Alaska and managed by the Southeast Regional Land Office, Division of Mining, Land and Water, DNR. State uplands adjacent to the coast of Jinhi Bay will be managed to support water-related commercial and industrial activities related to the community of Naukati. This is because of the limited suitable waterfront for these uses at Naukati. Residential development in this subunit is only intended to occur when the supply of residential land at Naukati becomes limited.

No residential land disposals are planned at Jinhi Bay because of options for private land ownership at Naukati and because of public preference for concentrating land disposals. Residential land disposal may be reconsidered during plan updates. Residential activities associated with authorized activities should be allowed if it is not practical to reside in Naukati. Other activities, such as commercial recreation, should be allowed consistent with the intent and guidelines of the plan.

The Jinhi Bay area is to be managed to support long-term settlement and water-related commercial and industrial development, situated at appropriate locations on the coast. Activities, such as aquatic farming, should be allowed adjacent to state land if options for settlement activities are retained and if aquatic farming will not cause other settlement activities to meet significantly higher sewage treatment requirements. Inland areas may be used to support other compatible uses, and may include limited timber harvest.

**TRADITIONAL USE FINDING:** Information available at this time suggests that the proposed aquatic farm would not disrupt traditional and/or existing uses of the area, such as commercial and sport fishing, subsistence activities, boat travel, and recreation. Through agency and public input, more traditional and existing use information may surface. If such information becomes available, any potential and/or existing conflicts will be addressed in the final best interest finding.

**CONSIDERATIONS:** The following criteria, set out in 11 AAC 63.050(b), has been considered and represents what is known at this time:

**Land Management:** There are no known land management policies or designations, other than those in the Alaska Coastal Management Program, the Prince of Wales Island Area Plan, and the Tongass Land and Resource Management Plan, which may impact this proposal. Any measures taken to mitigate impacts on the resources identified in the above-mentioned plans are listed below.

**Pending / Existing Uses:**

1. There are no known pending use conflicts or potential impacts to nearby communities or residential land due to the placement of the proposed facilities at this location.



2. Information available at this time suggests that placement of the additional facilities at this location would not disrupt the traditional and existing uses of the site for use as an anchorage, commercial and sport fishing, recreation, and tourism.
3. Information from the Prince of Wales Island Area Plan indicates that there are historic and cultural resources in the area. As stated above, DNR will consult with the Division of Parks and Outdoor Recreation, Office of History and Archaeology, with any recommendations included in the final best interest finding.
4. There are no other commercial or industrial facilities known to exist in the area.

**Public Access:** Public access will be protected in accordance with 11 AAC 63.050(b)(6) and 11 AAC 51 and will be addressed in any resultant lease agreement.

**Public Trust Doctrine:** All lease agreements are subject to the principles of the Public Trust Doctrine in order to protect the public's right to use navigable waters and the land beneath them for navigation, commerce, fishing, and other purposes.

**Mitigation Measures:** There are no known conflicts or potential impacts that can be ascertained at this time due to the placement of the additional facilities. However, if conflicts or potential impacts are identified during the public/agency comment period that can be mitigated by special stipulation(s), these special stipulation(s) will be included in the final best interest finding and any resultant lease agreement.

**Social, Economic, and Environmental Concerns:** There are no known significant social, economic, and environmental impacts from the placement of this proposal.

**Surface Area:** The proposal does not encumber more than a third of the surface area of a bay, bight, or cove in accordance with 11 AAC 63.050(c).

**ADVANTAGES / DISADVANTAGES:** Aquatic farming may provide opportunities to increase income and diversify the state's economy by utilizing state tide and submerged lands for this purpose. The advantage of allowing this activity on state owned tide and submerged lands is the potential employment opportunities that may be available in the future when the farm starts to produce. In addition, secondary jobs may be created or increased from businesses involved in marketing and transport of the product.

The disadvantage of allowing this activity on state owned tide and submerged lands is the classification within the proposed EC1 through EC5 grow-out area and the possible conflict with the areas use as an anchorage. The public may not be aware that uses protected under the Public Trust Doctrine remain intact.

**RECOMMENDATION:** Considering the information presently available, it is determined to be in the state's best interest to amend the lessee's current lease to include the additional grow-out areas M through X and EC1 through EC5. The lease amendment would raise the lessee's current lease fee by \$125.00 as 1.87 acres will be added to the current acreage total of 3.39. In addition, due to the inherent costs for removal of the additional structures should the lessee abandon the site without completing site cleanup and restoration, the security bond would be adjusted from "\$2,500" to read "\$3,500" in the lease amendment. This figure was derived from the division's standard bond matrix. Any resultant amendment to the lease will include any stipulations identified above and any which

may be required as a result of public comments. Approval of the amendment application is recommended with a new security bond in the amount of **\$3,500**.

---

John S. Thiede  
Aquatic Farm Program Manager

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Date



### Amendment Description:

Having early success with using the vexar bags to culture a superior Pacific oyster I want to explore more and different types of areas. I need to locate the best direction of line placement and tidal areas for flow of food. Some locations of the current farm footprint experience icing during the winter. I need to find locations suitable for winter placement.

### PARCELS M – S

- Parcels M – R are small beach areas located on the eastern shore of Kasaan Islands just south of the existing Parcel A. Pacific oysters will be cultured here, depending on the size of the area, using two to five intertidal near-bottom “flip-flop” lines anchored to rebar or bedrock using ½ inch expansion bolts at the 0 – 2 foot tide level. If the area is over 25 feet in length then it will be supported by cedar or ABS posts approximately 2.5 ft high and anchored by a concrete foot buried 10 – 12 inches into the substrate or with rocks. The flip-flop gear will consist of vexar mesh bags with one end attached to rope, galvanized wire, steel cable, or vinyl-coated wire using two bait holder pins per bag. The bags are 36 inches by 18 inches in size with a mesh size of ¼ or ½ inch. The opposite end of the bag has a foam float wrapped in protective netting attached with zip lock ties.

### PARCEL U

Parcel U is an expansion of the existing beach in Parcel J on the west side of Dargun Point. It will be used for flip-flop culturing of Pacific oysters in the same methods as previously described for Parcels M – S.

### PARCEL V

Parcel V is a .25 acre beach located inside an unnamed inlet on the north east side of Dargun Point. It also is suited for and will be used in the previously

described manner for Pacific oysters using the flip-flop bag method. This inlet did not ice over in previous winters and should be a better winter site.

#### PARCEL X

Parcel X is located on the eastern side of the back of Kahli cove. It is at the elevation suited to the described culturing of Pacific oysters using the flip-flop method.

#### PARCEL T

Parcel T is a high water cove off the unnamed inlet on the east side of Dargun Point. It will be used to culture Pacific oysters in floating vexar mesh "sharkfin" bags with the mesh wrapped foam floats on each side of the bag. The rope or wire or cable will be threaded through one inch PPVC pipe pieces attached to one side of each bag with zip ties. The line will be anchored to the bottom on each side of the cove.

#### PARCEL W

Parcel W is located in the rocks east of Kasaan Islands and south of the existing processor and grow out area of Parcel A. One to three "sharkfin" lines of bags as previously described will be anchored to the rocks using ½ inch expansion bolts at the subtidal level.

#### PARCELS EC1 – EC5

These parcels are all short stretches of beach between rocks of suitable height to hold flip-flop lines located in an unnamed cove on the southern end of El Capitan Island. They will be used as a new area of food source to cultivate Pacific oysters in the previously described method of flip-flop bags on lines anchored into the rocks.

Parcel	Width	x	Length	=	Area	/ 43560	Acreage
<u>M</u>	<u>30</u>		<u>50</u>		<u>1500</u>		<u>0.03</u>
<u>N</u>	<u>45</u>		<u>166</u>		<u>7470</u>		<u>0.17</u>
<u>O</u>	<u>76</u>		<u>117</u>		<u>8892</u>		<u>0.20</u>
<u>P</u>	<u>20</u>		<u>108</u>		<u>2160</u>		<u>0.05</u>
<u>Q</u>	<u>40</u>		<u>125</u>		<u>5000</u>		<u>0.11</u>
<u>R</u>	<u>38</u>		<u>94</u>		<u>4800</u>		<u>0.08</u>
<u>S</u>	<u>70</u>		<u>97</u>		<u>6790</u>		<u>0.16</u>
<u>T</u>	<u>64</u>		<u>80</u>		<u>5120</u>		<u>0.12</u>
<u>U</u>	<u>35</u>		<u>150</u>		<u>5250</u>		<u>0.12</u>
<u>V</u>	<u>32</u>		<u>335</u>		<u>10720</u>		<u>0.25</u>
<u>W</u>	<u>57</u>		<u>125</u>		<u>7125</u>		<u>0.16</u>
<u>X</u>	<u>85</u>		<u>95</u>		<u>8075</u>		<u>0.19</u>
<u>EC1</u>	<u>18</u>		<u>92</u>		<u>1656</u>		<u>0.04</u>
<u>EC2</u>	<u>20</u>		<u>89</u>		<u>1780</u>		<u>0.04</u>
<u>EC3</u>	<u>26</u>		<u>41</u>		<u>1066</u>		<u>0.02</u>
<u>EC4</u>	<u>23</u>		<u>133</u>		<u>3059</u>		<u>0.07</u>
<u>EC5</u>	<u>12</u>		<u>225</u>		<u>2700</u>		<u>0.06</u>
<u>UL</u>	<u>150</u>		<u>300</u>		<u>45000</u>	Total	<u>1.03</u>
							<u>2.90</u> Acres

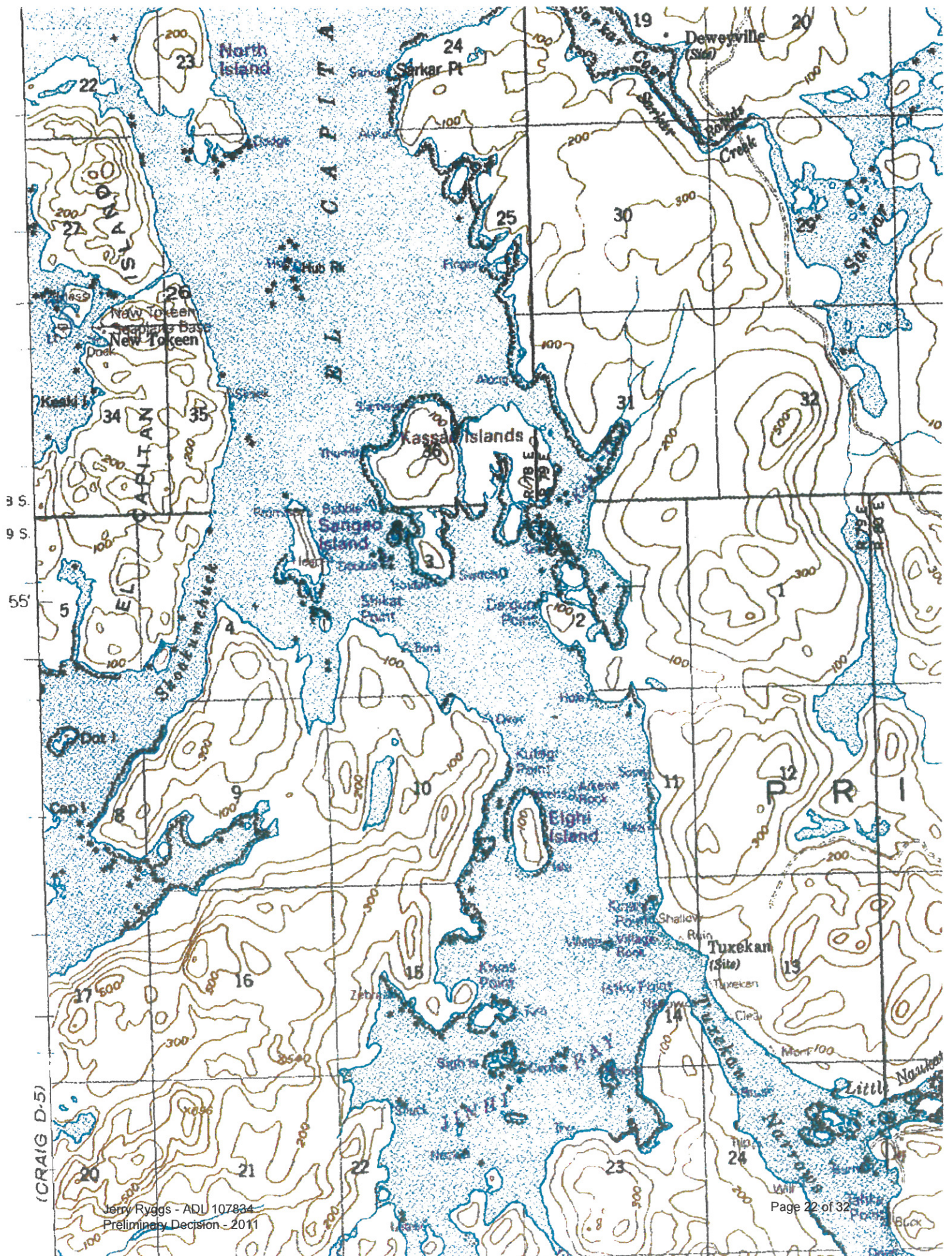
— uplands USFS

Flip/ Flop Bag Area  
Shark-fin Area  
Upland Support Facility

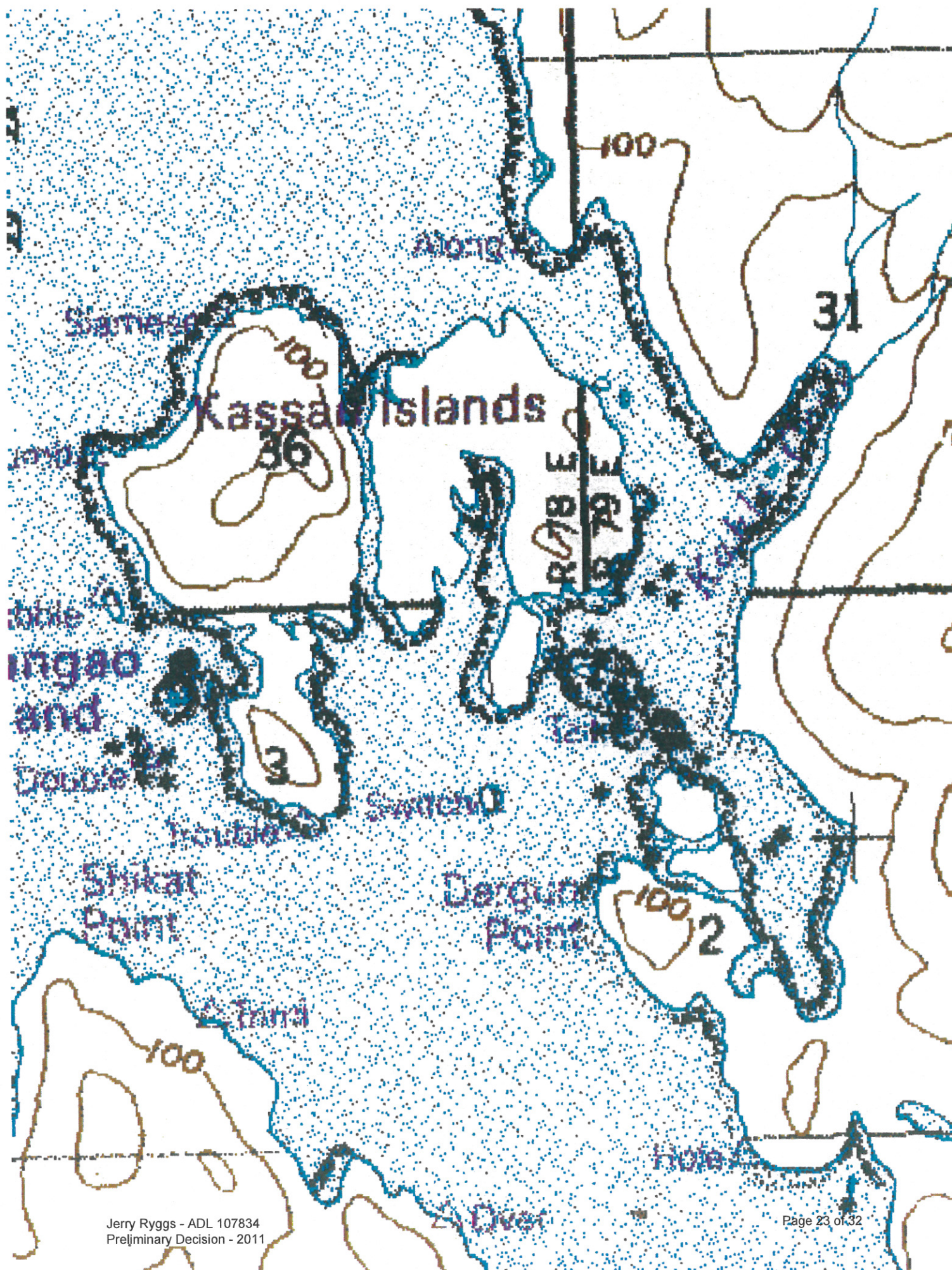
Fig #1

Title: Area of new Parcels Kahli Cove Farmsite  
Name: Jerry Ryggs/ DBA Oysters LLC  
Waterbody: Kahli Cove  
Area/Region: SE Alaska  
Today's Date: April 12, 2011









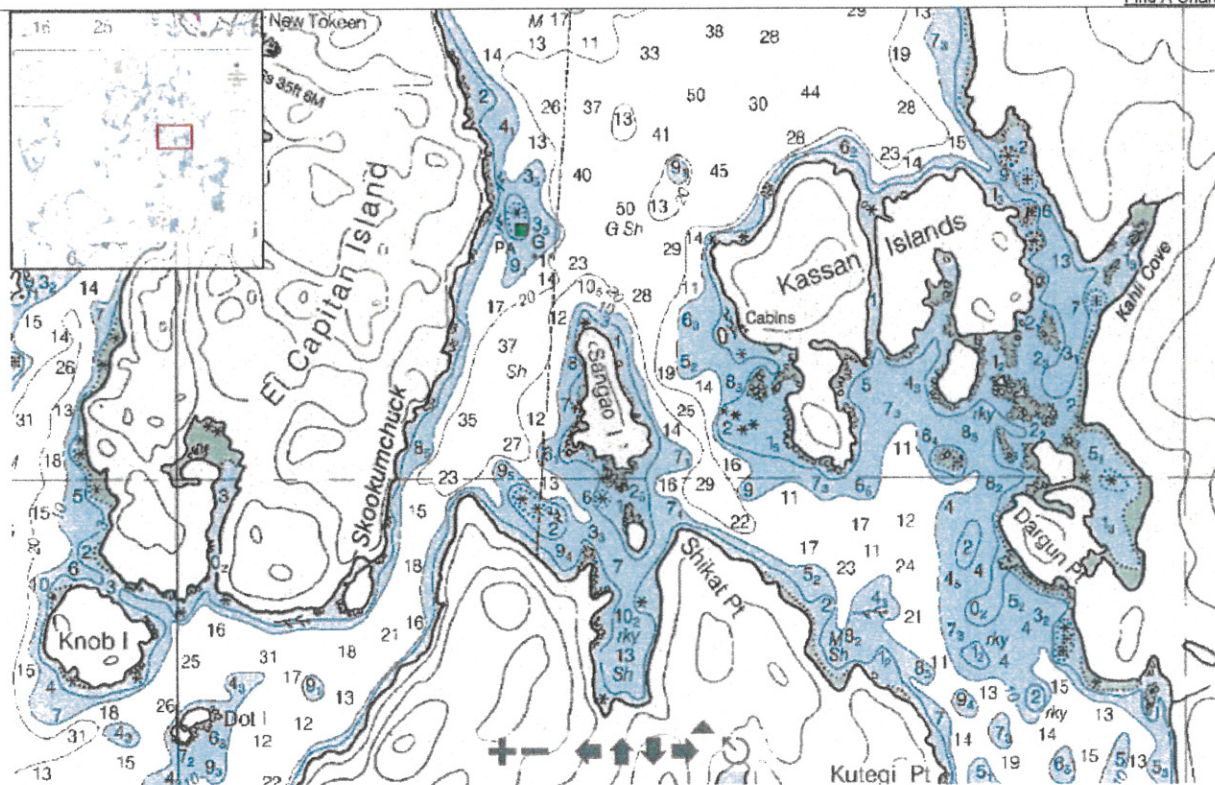


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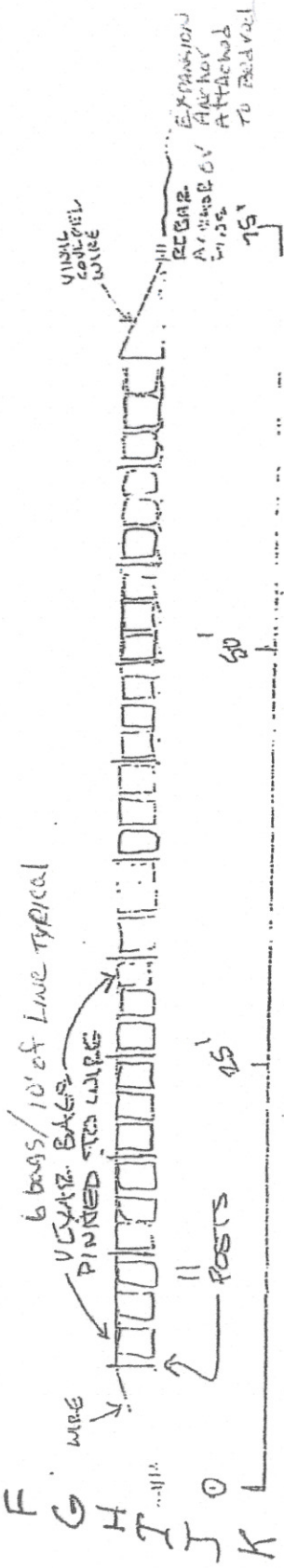
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# INTERSTITIAL FLIP-FLOP BAG GEAR

PERIODIC

W: N O R O R S S V  
 EC1  
 EC2  
 EC3  
 EC4  
 EC5



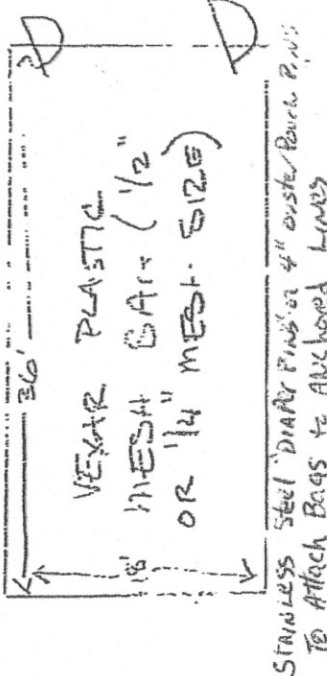
GALVANIZED WIRE 22

VINYL COVERED WIRE

POST DETAIL 1" = 1 FT.

3" ABS 1/2" CEORAY POST

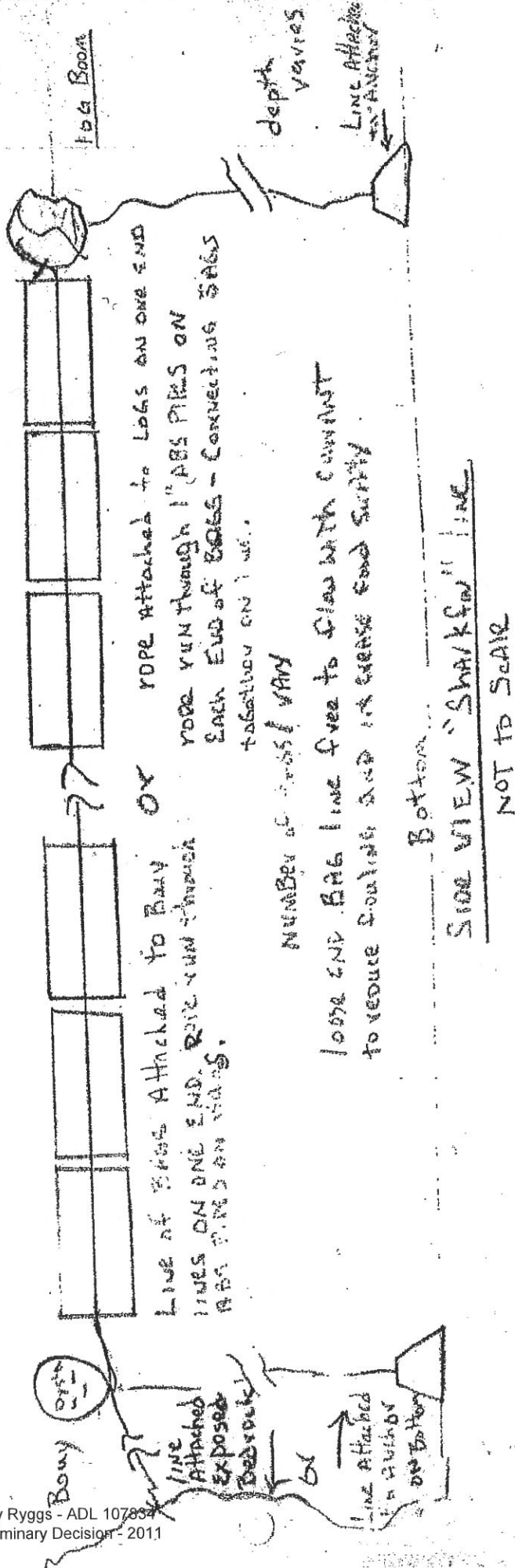
POSTS POSITIONED IN A LINE AT 0-2 FT. TIDE LEVEL ON BEACH (12 IN SUBSTRATE TYPICAL). NORMALLY COVER AT 0-2 FT TIDE)



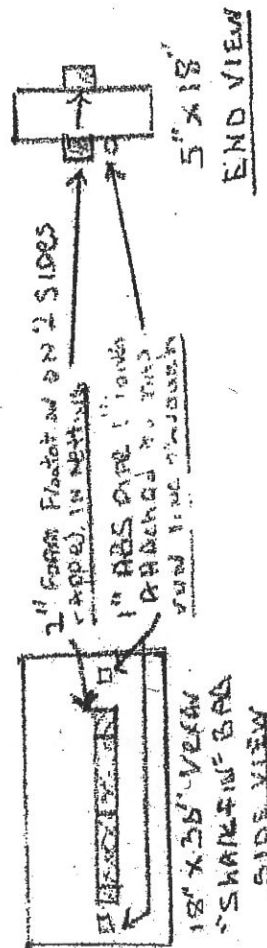
Title: Flip/Flop Bag Detail FIG #2  
 Name: Jerry Ryggs/ DBA Oysters LLC  
 Waterbody: Kahli Cove  
 Area/Region: SE Alaska  
 Today's Date: April 12, 2011



# Shark Fin Bak Detail

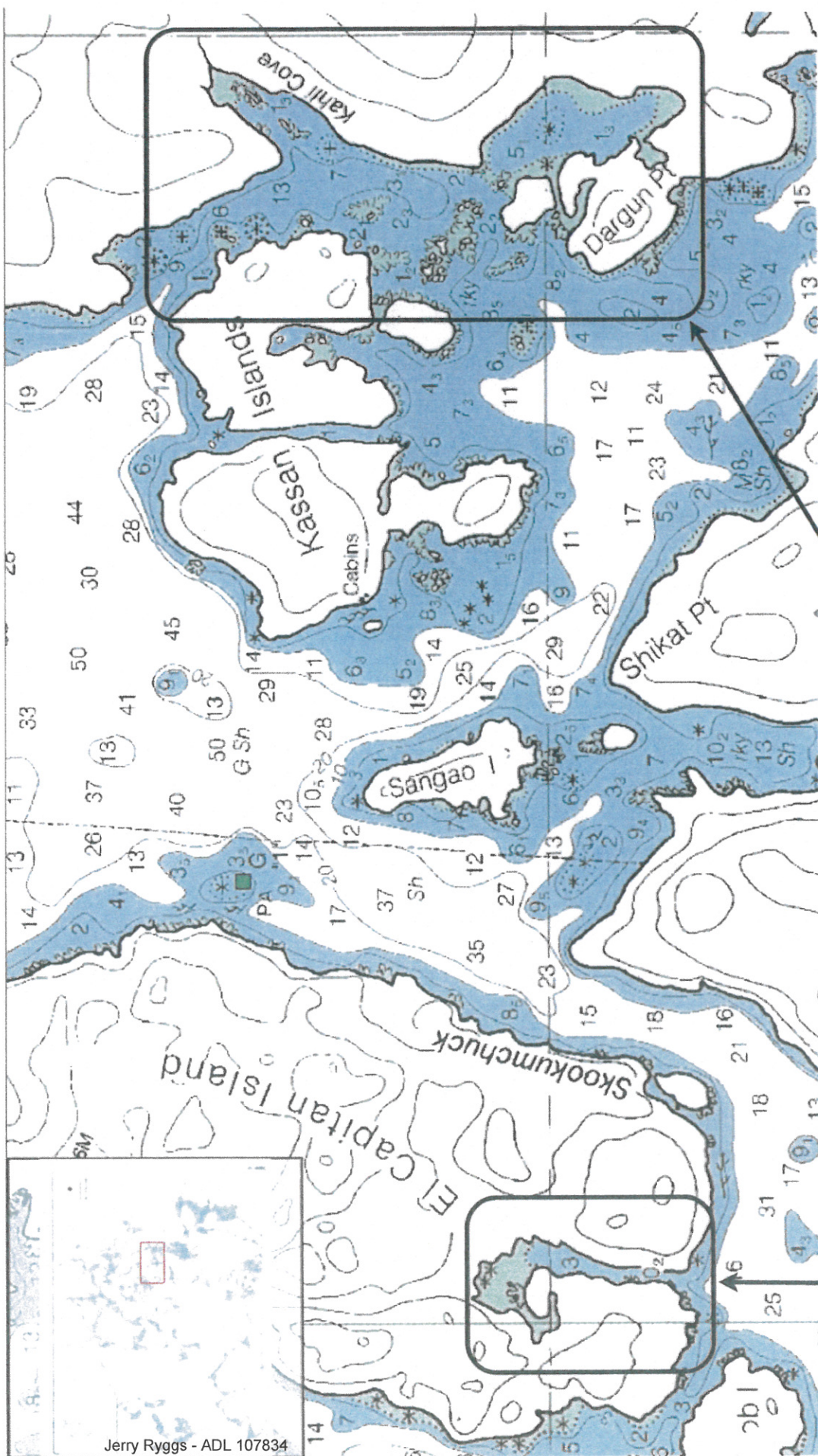


NEW Parcels:



5504  
1-10

Fig #3  
Title: Floating "Sharkfin" Bag Detail  
Name: Jerry Ryggs/ DBA Oysters LLC  
Waterbody: Kahlii Cove  
Area/Region: SE Alaska  
Today's Date: April 12, 2011



Title: Overhead View Kahlia Cove Farmsite  
 Name: Jerry Ryggs/ DBA Oysters LLC  
 Waterbody: Kahlia Cove  
 Area/Region: SE Alaska  
 Today's Date: April 12, 2011

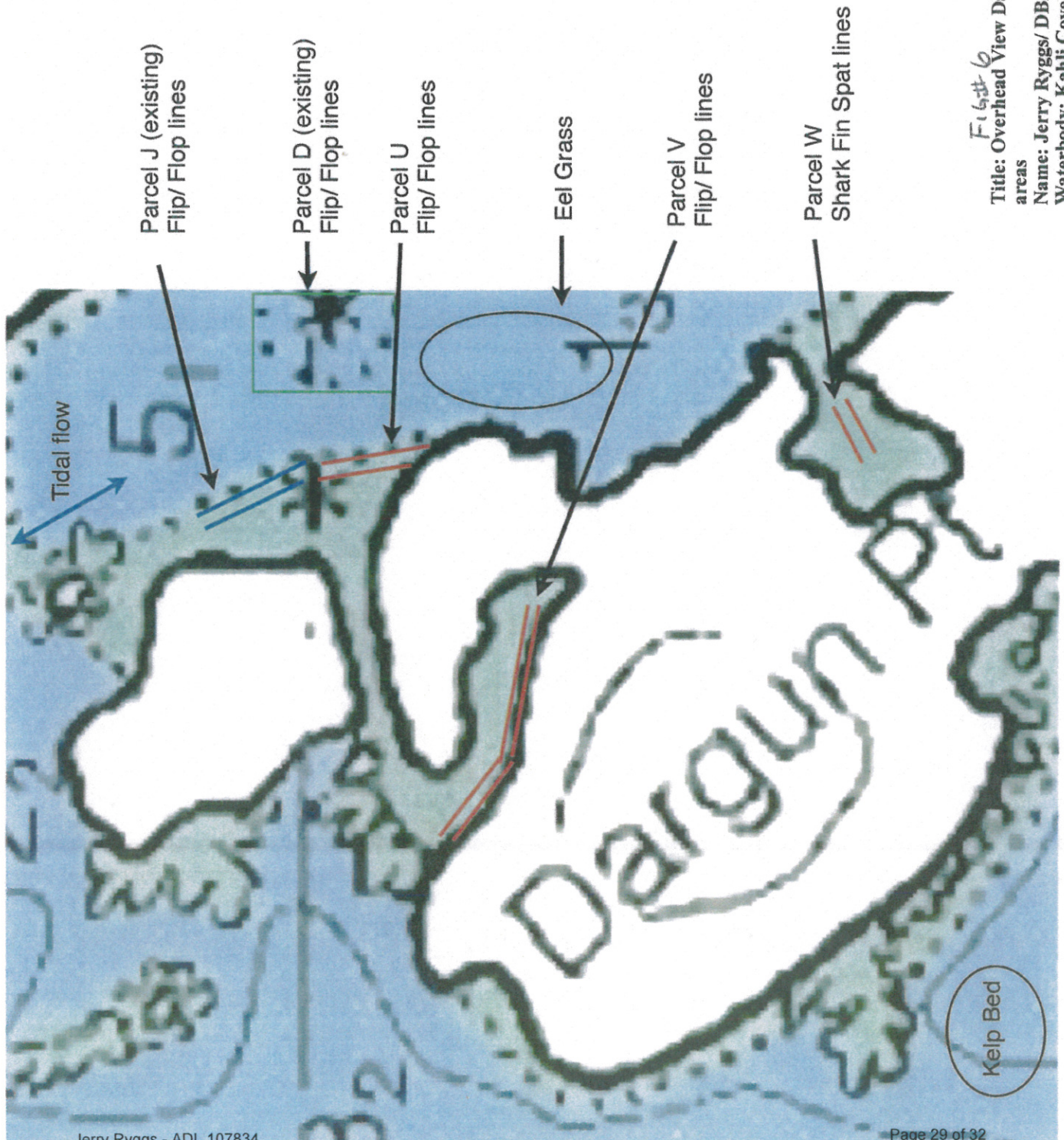
Kahlia Cove,  
 Prince of Wales Island  
 10 Intertidal Flip/ Flop Area's  
 2 Sharkfin Growout Area's  
 1 Upland Support Facility

Question Cove,  
 El Capitan Island  
 5 Intertidal Flip/ Flop Area's  
 Total 0.23 Acres









*Flight 6*  
 Title: Overhead View Dargun Point Growout areas  
 Name: Jerry Ryggs/ DBA Oysters LLC  
 Waterbody: Kahli Cove  
 Area/Region: SE Alaska



# Oyster Growout Area's

Inter tidal

Flip/ Flop Bags

Jerry Ryggs - ADL 107834  
Preliminary Decision - 2011



File #7

Title: Oyster Growout Areas  
Flip/ Flop & Shark-fin  
Name: Jerry Ryggs/ DBA Oysters LLC  
Waterbody: Kahli Cove  
Area/Region: SE Alaska



Growout Area EC 4  
23'x 133'  
0.07 Acre

Growout Area EC 3  
26'x 41'  
0.02 Acre

Growout Area EC 2  
20'x 89'  
0.04 Acre

Growout Area EC 1  
18'x 92'  
0.04 Acre

Growout Area EC 5  
12'x 225'  
0.06 Acre

Un-named cove on south end of El Capitan Island known as "Question Cove" by locals. Flip/Flop growout lines at 0' to 2' tide level varying in length. With vexar bags hanging by diaper pins or bait holders supported on posts as needed.



Title: Overhead View Un named Cove, El Capitan Island F.G. 8  
Name: Jerry Ryggs/ DBA Oysters LLC  
Waterbody: El Capitan Passage  
Area/Region: SE Alaska Page 31 of 32



# Upland Support Facility

150' x 300'

+/- 1.00 Acre

Bunk House

24'x38'x16'

3 Bed/ 1 Bath

30'x40'x24' Barn

Floating  
Dock/ gang  
way

Barn

House

Parcel X  
85'x95'  
0.19 Acre

Parcel F  
Existing  
Intertidal

Not to scale

## Upland Support Facility Description:

24'x38'x16' (two story) Bunk House:  
3/bed, 1/bath, Kitchen, Living room  
4-6 people

30'x40'x24' Barn:

10'x 20' shop, 10'x10' generator room  
(solar panels on roof), 30'x30' storage  
area, gear, water storage tank(collect  
water from roof).

Adjacent upland owners:

Tongass National Forest, USFS, USDA  
Thorne Bay, AK

Purposed septic system:

Biological Aerobic Sewage Treatment  
System.

Model: MSD 1200

Environmental Marine Inc.

[www.envymar.com](http://www.envymar.com)

Parcel E will discontinued upon approval  
of Upland Support Facility.

This location best suits working of the  
farm, it is centrally located, with view of  
the processor and most of the growing  
area's. Southern exposure for solar gain  
and shelter behind from forest from  
prevailing NW winter winds.

Fig 9

Title: Kahli Cove Oyster Growout area &  
Upland Support Facility  
Name: Jerry Ryggs/ DBA Oysters LLC  
Waterbody: Kahli Cove  
Area/Region: SE Alaska  
Today's Date: April 12, 2011